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IMPROVING STAFF NUTRITIONAL PRACTICES IN COMMUNITY-BASED GROUP HOMES: EVALUATION, TRAINING, AND MANAGEMENT

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We evaluated the effectiveness of a staff training and management package on nutritional practices in two community-based group homes serving adults with developmental disabilities. Food storage, menu development, and meal preparation were trained in a multiple baseline format, followed by supervisor feedback. All staff behaviors increased after training and were maintained for up to 1 year. Biological indices reflected collateral improvements in the health of consumers, and surveys of staff and parents established social validity.

DESCRIPTORS: nutrition, group homes, staff training and management

In the past 20 years, there has been a dramatic increase in the number of individuals with developmental disabilities who are served in community residences. Although community-based residences are beneficial for many individuals, they result in staff training and management issues that are not encountered in institutional settings (Dyer, Kneringer, & Luce, 1996). One staff training issue unique to community residences is dietary management. In institutional settings, menu development, food storage, and meal preparation are managed by trained food-service personnel. In community residences, these responsibilities fall to consumers and direct-care staff, who may have no training or experience.

Numerous studies have documented the benefits of staff training and management interventions in institutional settings (Reid & Whitman, 1983). This study was designed to evaluate sound nutritional practices in community-based group homes. Biological indices of consumers' health were monitored to evaluate collateral effects, and social validity was assessed by surveying staff and parents.

METHOD

Participants

Thirteen direct-care providers who worked in two community-based group homes served as subjects. The staff members worked from 3:00 p.m. to 11:00 p.m., supervising 3 adults in one group home and 2 adults in the second home. The adults all had developmental disabilities and exhibited severe behavior problems. All staff members had bachelor's degrees and had worked in the group homes from 1 month to 3½ years. Ten of the staff members were employed throughout the study. After staff training, 3 staff members resigned and were replaced by 3 new employees.

Measurement

On a weekly basis, the first author and one other trained observer made unsched-

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Copies of the full-length thesis, as well as other information, may be obtained from Mary-Jean Kneringer at Bancroft NeuroHealth, Hopkins Lane, Haddonfield, New Jersey 08033.

uled visits to the group homes and collected data on three categories of staff behavior: (a) storage, which included percentage of foods correctly stored in the refrigerator and percentage of foods correctly stored in cabinets; (b) menu development, which included percentage of menu items that adhered to *The Guide to Eating for Heart Health* (1996) and adherence to recommended dietary allowances (RDAs) as prescribed by the U.S. Department of Agriculture (1992); and (c) meal preparation, which included a visibly posted menu, adherence to that day's menu, appropriate portion sizes, and staff–consumer interactions (i.e., hand washing, consumer involvement in meal preparation and table setting, and staff praise). Average interobserver agreement on 28% of all observations ranged from 84% to 97%.

The following biological indices were assessed for the 5 consumers by a nurse both during baseline and maintenance: (a) body weight in kilograms (kg), (b) blood pressure in millimeters of mercury (mm Hg), (c) cholesterol level in milliliters per deciliter (ml/dl), and (d) triceps fatfold in millimeters (mm). Social validity was assessed via an 8-item Likert-type questionnaire administered to staff and families during baseline and maintenance conditions. Respondents were asked to evaluate consumer body weight, appearance, energy level, and menu adherence, as well as staff knowledge of nutrition, involvement in menu planning, and support of consumers in menu planning and adherence.

Design and Procedure

A multiple baseline design across staff behaviors was used to evaluate the effects of training and feedback. During baseline, which was begun 1 month prior to staff training, staff members were unaware of the dependent variables being observed. Following baseline, staff received three 1-hr sessions of didactic instruction, accompanied by written handouts and checklists. Training sessions included (a) proper storage, (b) menu development, and (c) meal preparation.

The only contingency applied to staff performance was supervisor feedback at weekly meetings. Immediate supervisors provided praise and constructive feedback verbally and via graphed data in a group format. Supervisors who had undergone the initial training trained newly hired employees. Maintenance was begun 12 months after storage training and 2 months after meal preparation training. Feedback to staff members was reduced to a monthly basis during the 6-month maintenance condition.

RESULTS AND DISCUSSION

Figure 1 shows the multiple baseline across staff behaviors for each of the two group homes. All staff behaviors improved after training and remained high during maintenance. Correct storage across both homes increased from a baseline mean of 54% to 89% after training for refrigerated items and from 82% to 96% for cabinet items. Healthy menu development increased from 28% in baseline to 81% after training. Correct meal preparation increased from 38% to 97% for menu posting, 59% to 98% for menu adherence, 29% to 90% for portion sizes, 37% to 92% for meal preparation, and 34% to 97% for staff–consumer interactions. Adherence to RDAs increased after staff training and continued throughout maintenance (data available from the authors).

Positive changes were seen in biological indices, as shown in Table 1. Body weight was reduced for 3 of the 4 consumers who were overweight at the beginning of the study (Mike, Jeanne, and Noelle). Jeanne,

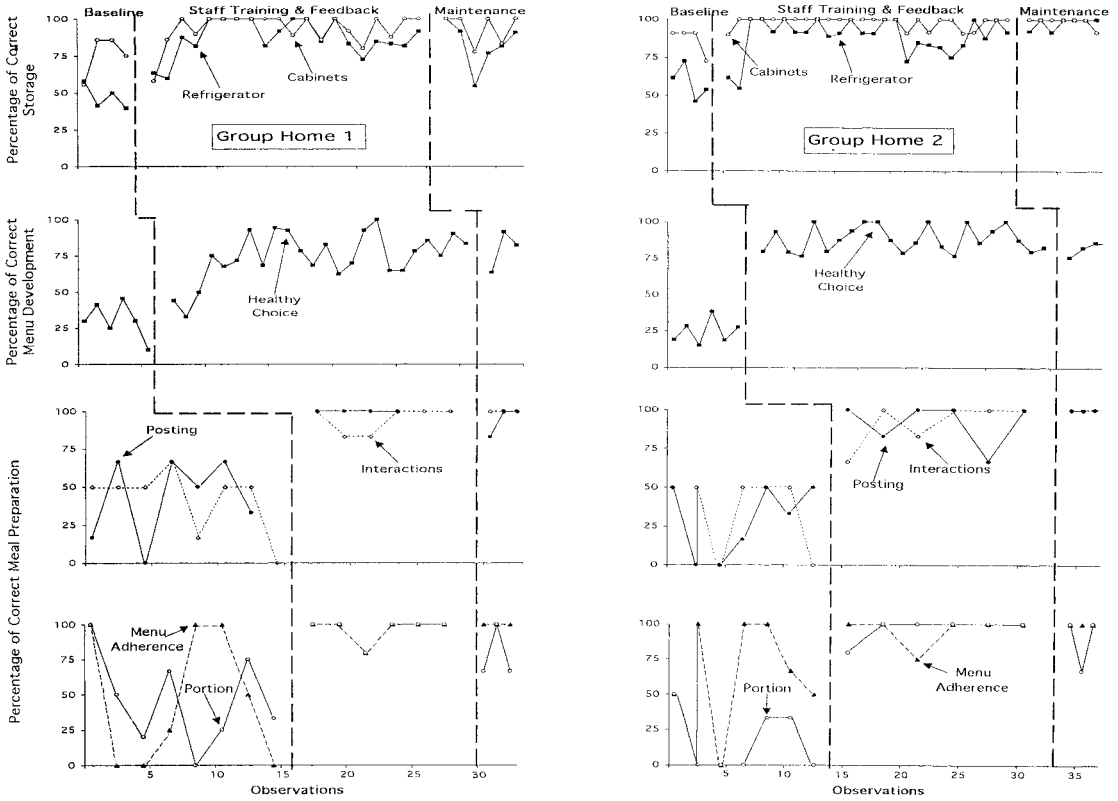

Figure 1. For each group home, the top panel shows percentage of correct refrigerator (filled squares) and cabinet (circles) storage; the second panel shows percentage of menu entries that were healthy selections; the third panel shows percentage of correct menu posting (filled circles) and interactions (diamonds); the bottom panel shows percentage adherence to menu entries (filled triangles) and portion size (circles).

Noelle, and Greg showed decreased triceps fatfold measures. Three hypertensive consumers (Mike, Greg, and Lisa) showed decreased blood pressure after staff training and feedback. One consumer who had cholesterol levels above 200 ml/dl during baseline (Jeanne) showed decreases after intervention.

Although training methods were derived from previous studies conducted in institutional settings, the degree of change here is noteworthy, as is the maintenance. Unlike

Table 1
Body Weight, Triceps Fatfold, Blood Pressure, and Cholesterol for Consumers Before and After Training

Group home	Consumer	Body weight (kg)		Triceps fatfold (mm)		Blood pressure (mm Hg)		Cholesterol (ml/dl)	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	Mike	76.2	64.9	12	12	134/74	122/70	227	231
	Jeanne	89.5	76.2	34	26	124/70	130/76	214	177
	Noelle	73.2	58.9	14	8	124/80	110/80	192	169
2	Greg	127	128	32	28	142/80	130/72	135	136
	Lisa	69.9	68.9	6	6	130/80	110/80	142	130

institutional settings in which supervisory personnel are usually present, employees in community-based group homes are often unsupervised for long periods. In this study, first-line supervisors were available to train newly hired employees using the pyramidal model (Page, Iwata, & Reid, 1982), and feedback was sufficient to maintain staff behavior.

Quality-of-life enhancements for people with disabilities who live in the community must include health management. The staff training and management package for improving nutritional practices evaluated in this study is a first step in that direction. Data from the staff and parent surveys provided an indication of social validity, with all measures showing positive change after staff training and management procedures were implemented.

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